



ABOVE • The Porter Bldg. dedication drew distinguished scientists, legislators and alumni. See stories at right.

features

Major Neuroscience Center Opens With Dedication, Symposium

1

NIMHD Director Ruffin Retires

3

Gilden To Give Straus Lecture

5

New Child Care Center Coming

12

departments

Briefs

2

Digest

10

Milestones

11

nih record

Porter Bldg. Opens with Dedication, Symposium

Dedication Features Host of Speakers

By Rich McManus

Hailed as a “tireless champion of biomedical research in general, and of NIH in particular,” by NIH director Dr. Francis Collins, former Rep. John Edward Porter was on hand Mar. 31 with a host of family members, friends and colleagues from both Congress and industry for the dedication of one of the world’s largest neuroscience facilities—the John Edward Porter Neuroscience Research Center.

The new building, a state-of-the-art laboratory

SEE **DEDICATION**, PAGE 6



NIH director Dr. Francis Collins (l) and former Rep. John Edward Porter at the dedication of the PNRC

Amenable to Math Approach

NIDDK Researchers Review Progress in Understanding Obesity

By Eric Bock

A mathematical approach to understanding obesity and findings on artificial sweetener use and weight gain were the topics at a recent Grand Rounds presentations by two NIDDK researchers in Lipsett Amphitheater.

First, NIDDK senior investigator Dr. Kevin Hall outlined his mathematical model, which accurately predicts weight loss and metabolic changes result-



Dr. Kevin Hall

SEE **OBESITY**, PAGE 4

Two-Day Symposium Draws Experts

By Shannon E. Garnett

To celebrate the dedication of the John Edward Porter Neuroscience Research Center, NIH recently held a 2-day scientific symposium highlighting research characteristic of the facility and showcasing some of the scientists who will be working in the PNRC.

Held Mar. 31-Apr. 1, the symposium brought together top neuroscience experts from across the U.S., leading NIH scientists and the two original visionaries for the building—Dr. Gerald Fischbach, NINDS director 1998-2001, and Dr. Steven Hyman, NIMH director 1996-2001. In fact, PNRC is considered their “brainchild.”

A Vision Realized

“The vision that Gerry and Steve had was to bring together intramural neuroscientists from multiple institutes—who were working in 10 different buildings across the campus—into one building, and then to arrange them not by institute, but according to the questions that they were asking and the techniques and tools that they were using,” said NINDS director Dr. Story Landis, opening the meeting. “So the Porter building in effect put the brain back together.”

Landis invited both Hyman and Fischbach to the podium to give remarks. Hyman—who is currently director of the Stanley Center for Psychiatric Research at the Broad Institute of MIT and Harvard, and also Harvard University distinguished service professor of stem cell and regenerative biology—provided background on the vision for PNRC. Prior to 1999, he explained, NIH housed its neuroscientists according to institute, but he and Fischbach sought to change that with creation of PNRC.

“It seemed that it would be a rather easy case to make that people should be clustered not by the institute that signs their paychecks,” said Hyman, “but rather by their intellectual interest, by forming a critical mass, or by the rather odd idea that maybe we could buy one shared

SEE **SYMPOSIUM**, PAGE 8



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NIH Record Office Bldg. 31, Rm. 5B41
Phone (301) 496-2125 Fax (301) 402-1485

Web address <http://nihrecord.od.nih.gov>

Editor

Richard McManus
Rich.McManus@nih.gov

Associate Editor

Carla Garnett
Carla.Garnett@nih.gov

Staff Writers

Dana Steinberg
Dana.Steinberg@nih.gov

Belle Waring
Belle.Waring@nih.gov

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NIH...Turning Discovery Into Health

briefs

STEP Forum on Successful Aging, Apr. 29

The staff training in extramural programs (STEP) committee will present "Live Long and Prosper: Successful Aging in Our Time," on Tuesday, Apr. 29 from 9 to 11 a.m. in Rockledge II, Rm. 9100. An information fair will be held from 11 a.m. to noon in Rm. 9112.

Aging is inevitable. What are the biological mechanisms governing aging? How do psychological, environmental and social factors affect successful aging? Translational research shows that we can influence how we grow old and improve the quality of our senior years. Join us as we explore the science and practical aspects of living longer and prospering.

Bike to Work Day, May 16

Join the NIH Bicycle Commuter Club in celebrating National Bike Month and Bike to Work Day on Friday, May 16 from 7-9:30 a.m. in front of Bldg. 1; 6:30-8:30 a.m. at Rock Spring business park and 6:30-9 a.m. at Rockville-Fallsgrrove (near NCI Shady Grove).

These sites will be featured among many local pit stops supported by the Washington Area Bicyclists Association in a salute to bicycle commuting. NIH usually wins the Metropolitan Washington Council of Governments' award for being the area's biggest employer of Bike to Work Day participants. Complete your free registration at www.biketoworkmetrodc.org/register-now/ and help NIH defend its title this year.

You must pre-register for the pit stop you plan to visit to receive a BTWD 2014 T-shirt, which will be available while supplies last. At the Bldg. 1 pit stop, all employees and contractors who show up riding a bicycle and wearing a helmet may enjoy breakfast snacks and participate in a raffle drawing.

If you have never tried commuting by bike to NIH and aren't sure how to begin, visit www.nihbike.com and click on the "Commuting" link. BTWD happens rain or shine. Volunteers are appreciated to help with preparations or on the day of the event. If you would like to help, email Vernon Anderson (andersonve@nigms.nih.gov). Participation in BTWD enhances awareness of the myriad benefits bicycle commuting brings to personal health, the community and the environment.

Open Enrollment for Voluntary Leave Bank

The Office of Human Resources has announced a second open enrollment for the NIH Voluntary Leave Bank. The Leave Bank is a pooled bank of donated annual and restored leave available to eligible members. It offers income protection and amounts to paid leave for members who have exhausted all of their leave and are affected by a personal or family medical emergency/condition.

The Leave Bank differs from the Voluntary Leave Transfer Program (VLTP) in that the bank is a depository of leave and leave is distributed to members who are approved to be leave recipients. The VLTP, on the other hand, requires a direct donation from a donor to a recipient. An advantage of the Leave Bank is that eligible members may receive leave from the bank to cover time out of the office without awaiting donations.

If you missed the first open enrollment, this is the final opportunity to become a 2014 member. Enrollment is open to all NIH federal employees. The open enrollment will run May 1-30. The membership period will begin June 29.

To elect to become a Leave Bank member, access the Integrated Time and Attendance System (ITAS) during the open enrollment and enroll under "Leave Bank Membership." The membership contribution is one pay period's worth of annual leave accrual. ITAS is available at <https://itas.nih.gov>.

Additional information about this benefit can be found at <http://hr.od.nih.gov/benefits/leave/vlbp/default.htm>. Questions may be directed to the NIH Leave Bank Office at (301) 443-8393 or LeaveBank@od.nih.gov.

BIG Chapter Hosts Competition, May 3

The 2014 student oratorical and STEM (science, technology, engineering and math) competition is being conducted by the NIH chapter of Blacks in Government (BIG) on May 3 at Howard University's Blackburn Center, 2397 6th St. NW, D.C.

The theme is "Exploring the Capability of Robotic Engineering." The program is designed to introduce and encourage students to embrace STEM concepts and professions.

The oratorical theme is "Entertainment or Behavior Modification: Do Violent Video Games Promote Violent Actions?" The program is intended to help students develop and enhance their oral and written communication skills in order to be more competitive in the global workplace.

Awards and prizes will be presented by NIH/BIG chapter to students who compete in a regional competition currently scheduled for June 21 in Washington D.C. Winners of regional contests will compete with students across the country at BIG's annual National Training Institute in Las Vegas on July 31.

nih record



NIMHD director Dr. John Ruffin, above and at right

Ruffin Retires from Federal Service After Almost 24 Years

By Kester Williams

“A shock to the system,” said one colleague on learning of Dr. John Ruffin’s retirement from federal service and as director of the National Institute on Minority Health and Health Disparities, having admired his passion, commitment and tenacity for so many years to make minority health and health disparities a national priority. And the question many ask is how did he do it?

“The ultimate measure of a man is not where he stands in times of comfort and convenience, but in times of challenge and controversy.” These words by Dr. Martin Luther King Jr., and his personal faith are the mantra that have guided Ruffin in leading the development of a national health disparities enterprise from an office to a center and now an institute. A visionary leader, he established an infrastructure for minority health and health disparities that has benefited numerous individuals, communities, institutions and organizations around the globe.

In August 1990, Ruffin arrived as the first NIH associate director for minority programs. No stranger to NIH, having been a beneficiary of the MARC and MBRS programs and having served on many peer review panels and workgroups for the National Institute of General Medical Sciences under the late Dr. Ruth Kirschstein, he understood the issues and came with a plan. He would oversee coordination of minority programs for NIH with a budget of \$1.5 million under the auspices of the Office of Minority Programs.

His first objective was to create a fact-finding team, which he asked to develop an action plan for OMP.

“I wanted to hear from the people. And I gave the team the charge to convene town hall meetings in communities around the country to find out what is it that we are not doing, that we



should be doing,” said Ruffin. This resulted in 13 recommendations that would later help shape the research agenda for the Office of Research on Minority Health (ORMH) and a platform on which NIH’s research agenda for minority health and health disparities would continue to build.

“The name change [to ORMH] was meaningful, because people did not understand the purpose of the office,” Ruffin recalls. “The calls I was receiving were from people who had equal employment opportunity grievances and thought this was the purpose of the OMP. Adding the words ‘Research on Minority Health’ more clearly aligned ORMH with the agency’s mission.”

Shortly thereafter, minority health issues began to gain a foothold within NIH when the late Dr. Bernadine Healy, then NIH director, created the Minority Health Initiative with a budget of \$45 million. This became the launch pad for long-term collaborative relationships with other NIH institutes, centers and offices.

ORMH did not have grant-funding authority and worked with the ICs to fund or develop minority research, training, capacity-building and outreach projects. Programs such as the NIGMS Bridges to the Future and the Fogarty International Center’s Minority International Research Training program transferred to the National Center on Minority Health and Health Disparities after it gained center status.

After intense debate, demonstrations and briefings in the late 1990s, NCMHD was established by Congress in 2000. “The creation of the NCMHD quickly changed the landscape,” Ruffin reflected. “The issue was no longer just about the health of minority populations, but other underserved populations, such as low-income and rural residents. We now had grant-funding authority with congressionally mandated programs, the authority to coordinate minority health and health disparities for all of NIH and to develop a comprehensive NIH-wide strategic plan for health disparities.”

In 2010, the Affordable Care Act created NIMHD. “The transition to institute status reflected the importance that Congress and the American people place on studying health disparities with an even greater intensity. It also enhanced John’s ability to make the strongest case possible for investing in this area of research,” said NIH director Dr. Francis Collins.

Ruffin also co-led the Federal Collaboration on Health Disparities Research, a coalition of 14 departments of the executive branch that leverages resources, expertise and initiatives around environmental, housing, justice, transportation and other issues related to health disparities.

Today, NIMHD’s budget has increased to about \$260 million. Ruffin’s accomplishments are many, but as he tells his constituency and colleagues, “I am proud of all that we have accomplished together over almost a quarter century, but sadly we have not yet reached our destination. There is still much unfinished business that we have to accomplish as a nation to achieve health equity.”

He reminded his staff that NIMHD’s accomplishments are their accomplishments. “You are a part of the puzzle, and if just one piece of the puzzle is missing, then it’s not complete. It means that regardless of your role in this institute, your contributions are critical in completing the puzzle.”

An avid jogger, Ruffin looks forward to participating in more local marathons, spending more time gardening and enjoying his family. 🍷

OBESITY

CONTINUED FROM PAGE 1

Right:

Dr. Kristina Rother pointed out that humans have receptors for the taste of sweetness not only on the tongue and oral pharynx, but also in the lungs, liver, pancreas and gut. And flies are even better equipped: they have such receptors on their wings and feet.

PHOTOS: ERNIE BRANSON

ing from various obesity interventions. Later, NIDDK senior clinical investigator Dr. Kristina Rother reviewed conflicting data on whether or not use of artificial sweeteners might underlie weight gain.

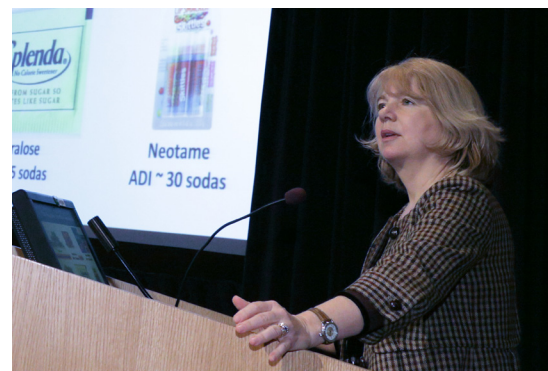
When Hall, who originally trained in physics, began his career at NIH, he met a Clinical Center dietitian who was designing weight loss programs based on the 3,500 calorie per pound rule. This weight loss rule—extant since the early 1950s—asserts that if a person cuts 500 calories from his or her daily diet, then it would result in a weight loss of one pound per week.

“It seemed odd to me. If I cut 500 calories from my diet, should I really lose 50 pounds in a year, 100 pounds in 2 years?” said Hall. “Something is wrong with this notion, just on its face.”

When dietitians use the 3,500 calorie rule, Hall thinks they wrongly assume two things: first, when someone loses weight, they lose only body fat; and second, that their energy expenditure stays the same. He devised a mathematical model to account for what happens when people of varying weights, diet and exercise habits try to reduce their weight. The model incorporates the results of well-controlled feeding studies that measured how diet changes metabolism, body weight and composition. Called the “body weight simulator,” Hall’s model, published in *The Lancet* in 2011, has already attracted more than 1 million unique users. He and his colleagues wanted “a realistic dynamical model...of the effects of obesity interventions.”

To validate the model, Hall compared predicted weight change to actual weight change in people undergoing a variety of diet and exercise interventions. In 2012, he measured changes in body fat, total energy expenditure and resting metabolism of 16 contestants on the television show *The Biggest Loser*. The show chronicles the efforts of obese adults trying to lose weight.

“Mathematical models can help you put together different data sources in a quantitative way and allow you to make inferences about things that were not measured,” said Hall. In an effort to understand the relative contributions of diet and exercise, Hall’s mathematical model was used to analyze the body composition and metabolism data from the TV show contestants. The model suggests that diet changes were responsible for more weight loss, but the exercise helped spare lean mass and generate more fat loss. Furthermore, continuation of a



relatively modest diet and exercise program can help sustain weight loss.

Hall has also applied his model to the U.S. population and showed that development of the obesity epidemic over the past 30 years could be explained by the population eating just one-third of the increased calories in the food supply over the same time period. Two-thirds of the increased per capita food supply since the 1970s was wasted. In recent years, food waste from farm to fork amounts to about 1,400 calories per person per day. The increased food waste since the 1970s, he said, could fully feed 60 million people or alleviate the hunger of 600 million people.

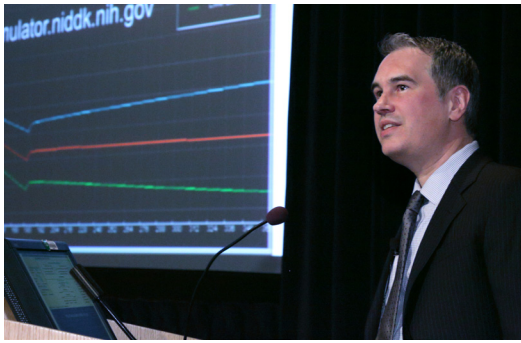
“Really shocking quantities of food and oil and fresh water [spent in agriculture] are being wasted,” he said. “These are not small numbers.”

He concluded by explaining his “push hypothesis of the U.S. obesity epidemic”—improvements in agricultural research along with changes in agriculture policy in recent decades have led to increased food production augmented by pervasive and sophisticated marketing, resulting in more cheap and processed food and ending up in fuller bellies and fuller landfills.

Next, Rother reviewed the evidence on weight gain and artificial sweeteners, also known as sugar substitutes. She pointed out a troubling similarity between the U.S. obesity rate (34.9 percent) and adult daily use of artificial sweeteners (32 percent, in 2010). “There’s a very nice parallel curve, but of course association doesn’t stand for causation.”

She focused on five FDA-approved products: saccharin (300 times sweeter than sugar), aspartame and acesulfame-K (both about 200 times sweeter), sucralose (Splenda, 600 times sweeter than sugar) and neotame (10,000 times sweeter).

Over the last 30 years, the consumption of artificial sweeteners has been on the rise. By 2010, 32 percent of Americans used artificial sweeteners at least once a day, she said. The increase in sweetener consumption has led some researchers to suggest that long-term artificial sweetener use actually might be contributing to the obesity epidemic.



"Mathematical models can help you put together different data sources in a quantitative way and allow you to make inferences about things that were not measured," said Hall.

Rother said the most well-known data that links artificial sweetener use to obesity comes from the San Antonio Heart Study. This large natural history study, which was initiated in 1979, concluded that adults who consumed artificial sweeteners in an amount as little as one diet soda per day were, on average, 4 pounds heavier 7 or 8 years later than those who didn't drink any.

Rother gave two examples of studies in children and adolescents, in which regular soda was replaced with diet soda in order to reduce the amount of calories. In one study, researchers gave obese teenagers diet drinks or supermarket gift cards. The teenagers who received the gift cards could buy anything. After one year, both groups had gained more weight, but the teenagers who drank diet beverages weighed less than the teenagers who received the gift cards. After 2 years, however, both groups of teenagers weighed about the same.

In another study, Dutch researchers recruited 641 children who used to drink sugar-sweetened beverages. They divided them into two groups: half of the children received either one can of a sugar-sweetened beverage and the other half an artificially sweetened beverage. The children who drank sugary beverages gained more weight than those who drank artificially sweetened beverages. The problem with the study was that they didn't compare the weight gains to children who just drank water. Thus, the only firm conclusion is that drinking regular soda leads to weight gain.

Rother also cited evidence from *in vivo* and *in vitro* studies and two small-scale clinical trials that suggest artificial sweetener use may affect metabolism, including gut hormone and insulin secretion.

"We clearly need to sort this out," said Rother. "So far, there is no convincing evidence that artificial sweeteners prevent obesity." 📌



Neurovirologist Gilden To Give NIAID Straus Memorial Lecture

Dr. Don Gilden will deliver the sixth annual NIAID Stephen A. Straus Memorial Lecture on Infectious Diseases. Gilden's lecture, titled "Varicella Zoster Virus and Giant Cell Arteritis," will be held on Monday, May 5, at 3 p.m. in Lipsett Amphitheater, Bldg. 10.

Gilden is currently the Louise Baum endowed chair and professor of neurology and professor of microbiology at the University of Colorado School of Medicine, where he also served as chair of the

department of neurology for more than 24 years. He is best known for his studies on varicella zoster virus (VZV), the cause of chickenpox and shingles.

He was the first to find VZV DNA in normal human ganglia, or brain tissue, and the first to verify that zoster sine herpete, or shingles pain without rash, is a distinct disease caused by VZV. Gilden also discovered that VZV "encephalitis" is actually a viral infection of cerebral arteries rather than brain tissue. His continuing research integrates cutting-edge molecular technology and clinical medicine, which has led to significant advances in basic scientific knowledge and in treatment of neurological diseases caused by viruses.

Gilden's lecture will focus on the role of VZV in the development of giant cell arteritis (GCA), a common form of vasculitis that is diagnosed using biopsies of the temporal artery (a major artery of the head) to identify inflamed immune cells. In multiple patients with features of GCA but whose biopsies were negative, Gilden has found abundant VZV antigens and VZV DNA, revealing the importance of the virus in GCA.

Gilden earned his B.A. from Dartmouth College and his M.D. from the University of Maryland School of Medicine. He completed a neurology residency at the University of Chicago Hospitals and a postdoctoral fellowship in neurovirology at Johns Hopkins University. He is the recipient of numerous awards and was elected to the Association of American Physicians, the American Association for the Advancement of Science and the Johns Hopkins Society of Scholars.

The lecture series honors Straus, who served NIAID for 30 years as a senior investigator and lab chief. He died in 2007.



Symposium Honors Epidemiologist Fraumeni

The symposium "Cancer Epidemiology: From Pedigrees to Populations" will be held May 6 from 1 to 6 p.m. in Kirschstein Auditorium, Bldg. 45.

It provides an opportunity for scientific exchange by leading experts in cancer epidemiology, highlighting critical findings made over the past 50 years as well as opportunities for future research that has potential to advance our understanding of the causes of cancer. The conference honors the leadership of Dr. Joseph F. Fraumeni, Jr., founding director of NCI's Division of Cancer Epidemiology and Genetics. Presentations will focus on future directions for high-quality, high-impact research that is the hallmark of the division. Registration is free but required: <https://www.cmp-inc.net/CancerEpiPedigrees-Populations/home.html>.

For more information, or to request reasonable accommodation, contact Jennifer Loukissas at loukissj@mail.nih.gov.



DEDICATION

CONTINUED FROM PAGE 1

Above, from l:

Featured speakers at the dedication included (from l) Porter, Sen. Tom Harkin, Collins, NINDS director Dr. Story Landis, NIDCD director Dr. James Battey and NIMH director Dr. Thomas Insel.

Below:

The atrium of the new Porter Bldg. was turned into a kind of auditorium for the dedication. Many viewed the proceedings from the upper floors.

For more about the building and the event, visit www.nih.gov/about/porter/index.htm.

PHOTOS: BILL BRANSON, ERNIE BRANSON

structure whose “form and function blend seamlessly,” according to Collins, will be home to 85 principal investigators from 10 NIH institutes and centers and will house some 800 scientists. It adjoins a neuroscience center completed in 2004. Together, the complex, also known as Bldg. 35, encompasses more than 500,000 square feet.

“My cup runneth over,” said Porter, who spoke at the culmination of a program that included current and former institute directors and two senators, in addition to Collins, who, in view of the honoree’s 21 years of ardent support of NIH on Capitol Hill, pleaded, “Mr. Porter, would you consider coming back to the Congress?”

“My principal purpose will be to thank you all,” said Porter, 78, who left Congress in 2001 having not only chaired the committee overseeing NIH’s appropriations for 6 years, but also having helped spearhead the doubling of NIH’s budget during the period 1998-2003. He apologized for the 10 years that passed—without any dedication ceremony—since phase I was completed. The lag was due in part, he said, to 9/11 and wars in Iraq and Afghanistan. “I have to own up to the delay...I had some hair then,” he quipped.

The dedication ceremony had originally been scheduled for October 2013, but the government shutdown postponed it as the bulk of NIH’s employees were deemed non-essential during the 16-day hiatus. “What nonsense!” roared Porter. “This is the most essential place.”

He remembered an era on the Hill when NIH leaders spent more than 3 weeks every spring in hearings before appropriators, explaining NIH’s work. “Today, I think there’s 2 hours for the whole of NIH. It’s a travesty,” he said. “The job of an appropriator is to learn...I don’t know how you can do that without having hearings.”

Porter said science fascinated him from an early age—as a teenager he left the Christian Science religion over its resistance to the then-new polio vaccine—and still turns first to science articles in the morning newspapers. Although

he grew up in a political family—his father was a judge—Porter tended toward science and history. “I was not really a very good politician,” he said, but then quoted Louis Pasteur on the favor chance bestows on a prepared mind. Of his ability to work effectively on behalf of science, he explained, “I was in the right place, at the right time, under the right circumstances, with the right motivation.”

One of those moments occurred in 1995, when the House was in Republican control for the first time in 40 years and Newt Gingrich was speaker. Gingrich proposed successive cuts to NIH’s budget of 5 percent, for 5 years, Porter recalled. “I thought that was insane, absolutely insane,” Porter said. Gingrich agreed to hear an appeal from distinguished scientists and pharmaceutical companies and conceded that he had made a terrible mistake.



Speakers Comment on Porter, Facility

☐ “If you seek out this public servant’s legacy, you will not find it here in the steel and the bricks and the mortar. You will find it in his legacy—in the countless medicines, therapies, treatments that have flowed from the dazzling discoveries here at NIH. You will find it in sharply lower death rates for heart disease and stroke and cancer. You will find it in the tireless, sustained, effective advocacy for biomedical research across 3½ decades in and out of government by John Edward Porter.”—Sen. Tom Harkin (D-IA)

☐ “I’m really thrilled that this [new building] is going to be helping other Americans,” said Sen. Mark Kirk (R-IL), Porter’s former chief of staff





FNIH's Dr. Charles Sanders offers toast as FNIH's Dr. Maria Freire (l) and the Porters look on.

Porter proudly recounted that, in those lean times, he was able to wrangle a 5.7 percent increase in NIH's budget rather than a cut, then additions of 6.9 and 7.1 percent in the next 2 years, followed by 15 percent boosts over the next 5 years, which resulted in the doubling of NIH's budget.

He decried the current political climate of austerity and sequestration. "Regular order [of floor voting on House amendments], hearings and making judgments about what is good and bad based on evidence is all gone," he said. "There is no courage in Congress today...NIH is getting along, but not very well."

He concluded his remarks with a plea to non-NIH scientists, who are free to lobby Congress on behalf of NIH's budget.

"To me, now is the time" for scientists to speak out across America in support of medical research, he said. "Advocates here in the

capital can only do so much...Scientists are the most respected people in America. They live...in districts funded by NIH. They will be listened to if they only engage with their member of Congress and make a difference."

Porter said advocates "shouldn't advocate in terms of their career," but rather the larger goal of human health. "If scientists don't defend science," he argued, "how can you expect other people to do so?...You've got to get out of your comfort zone and impact decisions made on the Hill."

Porter predicted "great things" for the science done in the building that bears his name, but said "it cannot be done without resources."

Now chair of Research!America and vice chair of the Foundation for the National Institutes of Health, he announced plans for a national campaign to reach all Americans about the importance of science.

"Each one of us has to be involved," Porter said. "Let's work together to put science and research at our country's highest priority. Now is the time to do it!"

The ceremony ended with Collins presenting Porter with a dedicatory plaque and portrait of the new facility. Afterwards, at a brief reception, FNIH board chair Dr. Charles A. Sanders offered a toast in verse:

*Here's to our own John Porter
Whose name is now enshrined in mortar.
A name we'll long remember with no trouble
For the NIH budget he did double.
May all who enter to discover a cure
Receive treatments that will long endure.
Let we, among thousands whose lives he affects
Salute John Porter with our highest respects.*



Rep. Chaka Fattah (D-PA, l) and Porter admire the new facility.

who suffered a major stroke in 2012 but has recovered and returned to Congress. He touted "the Porter legacy of accelerated and additional funding for NIH, America's gift to mankind and the future of patients everywhere."

✎ "This is a spectacular new building. But it's much more than a building for us. This is a new culture for the way that we do science. This building is more than just interdisciplinary... the building is not organized by institute, it's organized by the question you're asking, the equipment you need, by the problem you're trying to solve...[This is] absolutely the best place and space to do that."—NIMH director Dr. Thomas Insel

✎ NIDCD director Dr. James Battey expressed gratitude that the new building will allow roughly half of his intramural program to move to Porter from expensive leased space 12 miles from campus.

✎ "The science that goes on here will be even better than the occasion and the building."—NINDS director Dr. Story Landis

✎ "John Porter has in many ways helped the



Guest speakers included (from l) Sen. Mark Kirk (who spoke via videotape), Dr. Steven Hyman and Dr. Gerald Fischbach.



NIH reach a new level of functioning...Most of all, for me, [he is] a role model... His steadfast support has really been extraordinary."—former NINDS director Dr. Gerald Fischbach

✎ "The late Ruth Kirschstein took me aside and, in a grandmotherly way, she said, 'Steve, it looks too nice. We're gonna get in trouble.'...I think [the building] will be remarkably positive for science."—former NIMH director Dr. Steven Hyman

✎ "Will you be a white knight for the Human Genome Project?" NIH director Dr. Francis Collins remembers asking Porter back before the HGP was launched. "Without hesitation he said, 'Yes, I will.' That was a profound turning point for me personally."



SYMPOSIUM

CONTINUED FROM PAGE 1

Above, from l:

Symposium presenter Dr. Kenton Swartz (l) of the NINDS molecular physiology and biophysics section greets alumni—former NINDS director Dr. Gerald Fischbach (c) and former institute executive officer Kevin Kirby.

Dr. Jeffrey Diamond of NINDS's synaptic physiology section explains how specialized synapses compute visual information in the retina.

Dr. Ellen Sidransky of NHGRI's Medical Genetics Branch discusses Gaucher disease and Parkinsonism.

Dr. Benjamin White of NIMH's Laboratory of Molecular Biology talks about "Studying Decision Making on the Fly."

Dr. Dietmar Plenz, chief of NIMH's section on critical brain dynamics, describes the cellular origin of neuronal avalanches.

Below:

Dr. Huda Zoghbi (l), professor of pediatrics, neurology, molecular & human genetics and neuroscience at Baylor College of Medicine, greets fellow presenter Dr. Maximilian Muenke of NHGRI's Medical Genetics Branch.

PHOTOS: BILL BRANSON



something [piece of equipment] instead of eight or nine of them."

According to Fischbach—currently chief scientist and fellow of the Simons Foundation in New York—completion of PNRC is a dream come true.

"It was a dream then and everyone here worked very hard to make this dream come true," he said. "The dream was that neuroscience is one discipline and that people from different institutes and different walks of life would come together in one open, interactive space."

Trailblazing Research Presented

True to their original idea of how research will flow openly and collaboratively at PNRC, the symposium covered a broad range of neuroscience that—like the building—was organized by larger, cutting-edge scientific themes. It featured five sessions with presentations on trailblazing research on everything from genetics to behavior.

The sessions—constructing neuronal circuits, cell biology of neurons, genetics of brain disease, dissecting neuronal circuits and how synapses shape circuit function—included such topics as selective synapse formation in the retina, traffic signs on the cellular microtubule highway, venom toxins and molecular mechanism of the nerve impulse, neurogenetics, neural codes for odors, expanding social network of ionotropic glutamate receptors and neurotransmitter vesicle fusion.

The talks covered a variety of scientific questions on smell, taste, hearing, behavior and attention and provided an opportunity to learn about innovative techniques such as live imaging of zebrafish behavior, thermogenetics, multielectrode array recording of primate behavior and MEG (magnetoencephalography) recordings in humans.

Attendees heard from more than a dozen NIH basic scientists and physician scientists, as well as extramural neuroscience leaders: Dr. Joshua Sanes of Harvard University, Dr. Lily Jan of the University of California, San Francisco, Dr. Huda Zoghbi of Baylor College of Medicine, Dr. Robert Desimone of MIT and Dr. Roger Nicoll of UCSF.

The symposium also offered many a first look at the newly completed state-of-the-art building that was designed to encourage collaboration and interaction among intramural scientists.

"I've always felt that as the NIH goes, so goes the rest of the world and I believe this building is the epitome of that idea," said Fischbach. "It's a wonderful place to be and work and I think that the beauty of it will influence the science for a long, long time to come."

(Andrey Kuzmichev contributed to this article.)



Among presenters were two scientists who work in the newly dedicated Porter Neuroscience Research Center: Dr. Matthew Kelley (l) of the NIDCD Laboratory of Cochlear Development speaks on wiring the brain's microscope. At right, Dr. Mark Stopfer of NICHD's Laboratory of Sensory Coding and Neural Ensembles speaks on neural codes for odors.



Dr. Robert Desimone, director of the McGovern Institute and Doris and Don Berkey professor in MIT's department of brain and cognitive sciences, gives a presentation on visual processing.



NINR director Dr. Patricia Grady speaks about palliative care in campaign videos.

NINR Launches ‘Palliative Care: Conversations Matter’ Campaign

Dealing with the diagnosis of a serious illness in someone of any age is difficult. When that diagnosis is for a child, it is especially hard to handle for the patient and for the entire family. Palliative care—comprehensive treatment of the discomfort, symptoms and stress of serious illness—can reduce a child’s pain and help manage other distressing symptoms such as breathing difficulties, nausea and fatigue. It can also provide emotional support to both the child and family throughout the course of an illness.

Palliative care provides comfort during many illnesses in children, including genetic disorders, cancer, prematurity, neurologic disorders, heart and lung conditions and others. Palliative care is important for children at any age or stage of illness and can enhance a child’s quality of life.

Research has shown that pediatric palliative care services may also increase overall satisfaction with care for patients and their families. Yet, many health care providers hesitate to recommend palliative care for their youngest patients and parents and caregivers are often unaware of its benefits.

To address this need, the National Institute of Nursing Research launched Palliative Care: Conversations Matter, a campaign to raise awareness of and improve communications about pediatric palliative care. The campaign aims to increase the use of palliative care for children living with a serious illness.

“Initiating palliative care conversations is often hard for both providers and families, especially in the pediatric setting,” said Dr. Patricia Grady, NINR director. “While it may not be an easy conversation, recommending palliative care to patients and families early can improve patient outcomes. We hope this campaign and its resources will help ensure that palliative care is considered for every child and family navigating a serious illness.”


To develop the campaign, NINR brought together parents and palliative care clinicians, scientists and professionals to give their input and expertise on what they felt was needed in the field.

The campaign emphasizes that palliative care works along with other treatments to enhance quality of life for children of any age living with a broad range

of serious illnesses. Additionally, the campaign strives to break the common association between palliative care and hospice care, stressing that palliative care is appropriate throughout illness—not only at the end of life.

The campaign’s evidence-based materials are designed to help providers initiate palliative care conversations with pediatric patients and their families as soon as possible following diagnosis and to continue these discussions throughout the illness to meet changing needs of the patient and family.

Campaign resources include a series of informational video vignettes and customizable tear-off pads. The videos offer advice to providers about how to start palliative care discussions with patients and family members and feature a mother’s personal experience with palliative care after her daughter’s neuroblastoma diagnosis. The tear-off pads, available in both in English and Spanish, encourage providers to have discussions with patients and their families by providing answers to common questions about palliative care and customizable patient education sheets. The campaign will be evaluated over the next year at selected health systems across the country.

To learn more about the Palliative Care: Conversations Matter campaign or to get campaign materials, visit www.ninr.nih.gov/conversationsmatter. 

NIH Guide Training Sessions Recently Completed

Do you know about the *NIH Guide for Grants and Contracts*? Known by its shorter title, the *NIH Guide* is an integral part of communicating with the grant community. It’s an online publication for NIH’s—and other operating divisions’—biomedical research grant policies, guidelines and funding opportunity announcements (FOA).



Guide team includes (from l) Felicia Shingler, Dr. Matthew Portnoy, Dr. Erica Brown, Kemi Adetayo. Not shown is Dr. Michelle Timmerman.

ICs submit FOAs and notices that are published daily by Office of Extramural Research staff via the *NIH Guide* publishing system. The grant community receives a list of items each week. Distribution includes more than 48,900 users. The guide is also used by NIH contracting offices and other HHS agencies to announce their funding opportunities. Recently, the *NIH Guide* team held training sessions for its IC liaisons, who enter announcements into the publication.

Feedback was encouraging. *NIH Guide* director Dr. Erica Brown “did a great job of addressing policy exceptions, deviation documentation required and nuances of FOA development/generation that can cause major delays in or derail the publication of documents,” said NIDDK liaison Terra Robinson, who attended the training.

Visit the guide at www.grants.nih.gov/grants/guide/index.html. Address questions via email to nihguide@od.nih.gov.

Postbacs Present Posters, May 1

Postbac Poster Day is scheduled for Thursday, May 1 at Natcher Conference Center from 10 a.m. to 3:30 p.m. Dr. Sharon F. Terry, president and chief executive officer, Genetic Alliance, will deliver the keynote address at noon. The keynote will be followed by presentation of mentoring award(s) to NIH investigators selected by the postbacs. Poster session I will take place from 10 a.m. to noon; poster session II lasts from 1:30 to 3:30 p.m. For details, visit https://www.training.nih.gov/postbac_poster_day.

Spinal Stimulation Helps Patients with Paraplegia Regain Movement

Four people with paraplegia are able to voluntarily move previously paralyzed muscles as a result of a novel therapy that involves electrical stimulation of the spinal cord, according to a study funded in part by NIH and the Christopher & Dana Reeve Foundation.



Study participant Kent Stephenson voluntarily raises his leg while his spinal stimulator is active.

PHOTO: UNIVERSITY OF LOUISVILLE

The participants, each of whom had been paralyzed for more than 2 years, were able to voluntarily flex their toes, ankles and knees while the stimulator was active; the movements were enhanced over time when combined with physical rehabilitation. Researchers involved in the study say the therapy has the potential to change the prognosis of people with paralysis even years after injury.

“When we first learned that a patient had regained voluntary control as a result of spinal stimulation, we were cautiously optimistic,” said Dr. Roderic Pettigrew, director of the National Institute of Biomedical Imaging and Bioengineering, which provided support for the study. “Now that spinal stimulation has been successful in 4 out of 4 patients, there is evidence to suggest that a large cohort of individuals, previously with little realistic hope of any meaningful recovery from spinal cord injury, may benefit from this intervention.”

One of the most impressive and unexpected findings of the study is that two of the patients who benefited from spinal stimulation had complete motor and sensory paralysis. In these patients, the pathway that sends information about sensation from the legs to the brain is disrupted, in addition to the pathway that sends information from the brain to the legs in order to control movement. The researchers were surprised by the outcome; they had assumed that at least some of the sensory pathway needed to be intact for the therapy to be effective.

The report was published in the Apr. 8 online issue of *Brain*.

Obesity Primes the Colon for Cancer, Says NIH Study

Obesity, rather than diet, causes changes in the colon that may lead to colorectal cancer, accord-

ing to a study in mice by NIH. The finding bolsters the recommendation that calorie control and frequent exercise are not only key to a healthy lifestyle, but also a strategy to lower the risk for colon cancer, the second leading cause of cancer-related death in the United States.

Drs. Paul Wade and Thomas Eling, scientists at NIEHS, led a collaborative team that made the discovery. The study appeared online Apr. 1 in the journal *Cell Metabolism*.

A large body of scientific literature says people who are obese are predisposed to a number of cancers, particularly colorectal cancer, Eling said. The researchers want to find out exactly how obesity prompts the body to develop colorectal cancer. Wade said that the likely candidates for triggering tumor growth in the colon are fat cells, but there are many more possibilities. Finding these cellular switches may give rise to production of medications to keep people from getting colorectal cancer.

“Once we identify the signaling pathways and understand how the signal is transduced, we may be able to design ways to treat colorectal cancer in obese patients,” Wade said.

Aspirin Does Not Prevent Pregnancy Loss, NIH Study Finds

A daily low dose of aspirin does not appear to prevent subsequent pregnancy loss among women with a history of one or two prior pregnancy losses, according to researchers at NIH.

However, in a smaller group of women who had experienced a single recent pregnancy loss, aspirin increased the likelihood of becoming pregnant and having a live birth.

Many health care providers prescribe low-dose aspirin therapy for women who have had a pregnancy loss (miscarriage or stillbirth) and who would like to get pregnant again. However, the effectiveness of this treatment has not been proven, the researchers wrote.

“Our results indicate that aspirin is not effective for reducing the chances of pregnancy loss in most cases,” said first author Dr. Enrique Schisterman, chief of NICHD’s Epidemiology Branch. He added, however, that additional research was needed to investigate the finding that women who had experienced a single, recent pregnancy loss (before 4½ months of pregnancy and within the past year) had an increased rate of pregnancy and live birth while on aspirin therapy.

The findings appeared in *The Lancet*.



Drs. Luis Salicrup (l) and Mark Parascandola

Embassy Fellows Bring NCI Expertise to China, Turkey

Scientists at NCI, working with embassy colleagues at the State Department, will provide scientific and technical expertise to government and private sector groups in China and Turkey.

Dr. Mark Parascandola, an epidemiologist in the Tobacco Control Research Branch, has been designated an embassy fellow at the U.S. embassy in Beijing, China.

Lung cancer incidence is high among both men and women in China and is the most frequently diagnosed type of cancer. Yet only 2.4 percent of women in China smoke—compared with 53 percent of men. Factors such as secondhand smoke may contribute to the high rates of lung cancer among non-smoking women in China. The China National Health and Family Planning Commission and the China Center for Disease Control are among groups working to address these health risks, through public education and community outreach programs.

Parascandola will work with U.S. experts to develop public-private partnerships that support the Chinese initiatives for smoke-free workplaces and tobacco control through cancer hospitals. He will also provide technical expertise and guidance in advance of the China-U.S. Smoke-free Workplace Initiative rollout, which is expected to launch this spring. This program has already enlisted the support of more than 150 companies in China that are invested in creating smoke-free workplaces for their employees. He will also support tobacco control protocols at regional cancer hospitals, which are being developed by the Cancer Institute and Hospital of the Chinese Academy of Medical Sciences.

A second embassy fellow, Dr. Luis Salicrup, is an international cancer research specialist at NCI's Center for Global Health who will work at the U.S. embassy in Ankara, Turkey.

Scientific research and development are important priorities in Turkey. The Scientific and

Technological Research Council of Turkey (TUBITAK) is the lead agency for management and funding of research projects in Turkey. TUBITAK officials, working with diplomats at the U.S. Embassy, have requested the collaborative support of NCI and other NIH institutes and centers in the areas of innovation, transfer of cancer-related technologies and international research and development.

Salicrup will work with members of TUBITAK and colleagues in the embassy to create programs in research and development, knowledge management, technology transfer, commercialization of research, intellectual property and clinical trials. He will also provide guidance on developing public-private partnerships.—

Linda Perrett 

When Operating a Government Vehicle, Think Safety

Have you ever seen a government vehicle illegally parked in a fire lane or a handicap space? Have you ever seen someone driving a government vehicle recklessly or over the posted speed limit? The answer to these questions is probably yes. NIH's Transportation Management Branch urges drivers of government vehicles to think safety.

Did you ever stop to think what would happen if an ambulance or a fire truck could not quickly access an area? Would you want to be responsible for delaying a response to an emergency? The fire lane is reserved for firefighters responding to an emergency.

Parking spaces for people with disabilities are established not only for convenience, but also for their safety. Did you ever stop to think you could be endangering someone's life by forcing him or her to park in a standard parking spot? People in wheelchairs risk being hit by drivers who cannot see them, a risk that rises the farther they must travel to enter a building. As a conscientious operator of a government vehicle, take a moment to think about ensuring the safety of everyone.

Taking a risk and gambling are synonymous with unsafe driving. Unfortunately, some NIH employees play the safety gamble each time they drive a government vehicle. Think about the odds. Driving over the posted speed limit is a losing bet and driving recklessly can make your luck run out quickly. Unsafe driving behaviors increase the odds of being in a motor vehicle accident.

Finally, did you know that the driver of a government vehicle is responsible for all fines associated with traffic and parking violations? The next time you are tempted to operate a government vehicle in an unsafe manner, think about the range of risks.

For more information about the use of government vehicles, contact the Transportation Management Branch at (301) 496-4511.

Next Protocol Navigation Lecture, May 5

The IRP Protocol Navigation Training Program Seminar Series continues with a lecture to be held Monday, May 5 from 2 to 3 p.m. in Bldg. 50, Conf. Rm. 1227/1328. The program is a trans-NIH effort to develop resources and tools and to provide training for intramural staff and contractors involved in protocol development, writing, coordination and management. Holli Beckerman Jaffe, NIH OD deputy ethics counselor, will present, "Who's on DEC? A Guide to the NIH Ethics Program and COI Review Process." For details, contact Beverly Barham, (301) 594-2494, bbarham@mail.nih.gov or Marcia Vital, (301) 451-9437, vitalm@mail.nih.gov.

Premenstrual Syndrome Research Studies

Women ages 18-50 who struggle with irritability, anxiety or sadness prior to menstruation are invited to participate in outpatient research studies. There is no cost for participation. Compensation may be provided. Phone (301) 496-9576 and refer to study 81-M-0126.



NIH will begin construction on a new child care center on the main campus this month. The new facility, currently called the Northwest Child Care Center, will become Bldg. 23 and will serve 170 children, from 6 weeks to 5 years of age. The center will be located at the north end of campus, between the Children's Inn and the NIH Fire Station.

NIH To Begin Construction on New Campus Child Care Center

NIH will begin construction on a new child care center on the main campus this month. The new facility, currently called the Northwest Child Care Center, will become Bldg. 23 and will serve 170 children, from 6 weeks to 5 years of age. The much-needed center will offer full day care in a traditional child development setting and will be accredited by the National Association for the Education of Young Children. It will be located at the north end of campus, between the Children's Inn and the NIH Fire Station.

Although there will be some large trees

removed to ensure safety and security at the building, over time the site will be landscaped to blend into the nearby nature preserve and will provide an outdoor learning environment for young children. In addition, the building is planned to be a green building with LEED (Leadership in Energy & Environmental Design) Silver certification to include a green roof. Construction is anticipated to take about 1 year and the facility is expected to open for children in summer 2015. Information about enrollment and registration will be available in October 2014.

The Office of Research Facilities and the Office of Research Services, in collaboration with the NIH child care board, will hold a groundbreaking ceremony on Tuesday, Apr. 29 at 2 p.m. at the site on Center Dr.

To follow progress of Northwest Child Care Center construction and to learn more about NIH child care resources, visit www.ors.od.nih.gov/pes/dats/child-care/centers/Pages/centers.aspx or call the ORS Division of Amenities and Transportation Services Child Care Program at (301) 402-8180.

Build Career, Shape Future at Career Symposium, May 16

The NIH Office of Intramural Training & Education invites all NIH graduate students and postdoctoral trainees, both basic scientists and clinicians, to participate in the 7th NIH Career Symposium on Friday, May 16 at Natcher Conference Center from 8:30 a.m. to 5 p.m. The symposium provides an opportunity for fellows and graduate students to learn about scientific career options and to explore factors that lead to career success.

Keynoter Dr. Gail Cassell, former vice president, Eli Lilly, speaks at 8:40 a.m. Panel sessions cover academic, government, industry and non-profit career paths. More than 80 speakers will provide career insights: what their current job entails, its pluses and minuses and how they got there.

For more information and registration visit www.training.nih.gov.

NIAMS Participates in Arthritis Twitter Chat

NIAMS recently participated in a *PBS News Hour* Twitter chat on the topic of arthritis. The institute was joined by the Centers for Disease Control and Prevention, the Mayo Clinic, the Arthritis Foundation and the American College of Rheumatology to answer questions tweeted from the public.

The chat "trended" on Twitter, becoming one of the most popular conversations at the time. The 1,133 tweets in the chat, posted by 220 participants, were viewed more than 53 million times by Twitter users. NIAMS was listed as one of the top influencers in the chat.

Questions touched on preventing arthritis, the differences between various forms of arthritis and its impact on people's lives, how diet and exercise can help and what new treatments are being developed. NIAMS tweeted links to its health information resources and NIH clinical research. Extramural program directors were on hand to answer questions.

NCCAM also participated by posting tweets about complementary and alternative approaches to treating arthritis.

